## Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A disposable needleless injection device comprising a body supporting or delimiting a plurality of elements forming a circuit of elements, the circuit comprising, from upstream to downstream, an initiation device associated with a pyrotechnic gas generator, a reservoir containing a liquid active principle that is to be injected and a system for injecting the active principle, the pyrotechnic gas generator comprising a pyrotechnic charge placed in a combustion chamber, said combustion chamber being divided into two volumes by a wall, the two volumes being defined, from upstream to downstream, as a first volume in which the pyrotechnic charge is placed and a second volume, the two volumes communicating via a first device for regulating a pressure level in the combustion chamber, the injection device further comprising an expanding membrane, initially furled, a membrane, furled before operation, constituting a sealed wall between the combustion chamber and the reservoir of active principle, said membrane being able, in operation, to deploy under the action of the gases originating from the combustion of the pyrotechnic charge,

wherein the expanding membrane has the shape of a cap made of an extensile material membrane is a cylindrical tube having a closed end and an open end, the closed end being positioned, before operation of the device, in the second volume of the combustion chamber and being positioned, after operation of the device, within the reservoir of active principle.

2. (Previously Presented) The device as claimed in claim 1, wherein the first device for regulating the pressure level includes a passage formed through the wall.

- 3. (Previously Presented) The device as claimed in claim 1, wherein the pyrotechnic charge is arranged in a first sub-volume of the first volume of the combustion chamber, this first sub-volume being initially closed.
- 4. (Previously Presented) The device as claimed in claim 3, wherein the first sub-volume of the first volume of the combustion chamber is separated, by a second device for regulating the pressure level, from a second sub-volume of the first volume of the combustion chamber which is situated downstream of the first sub-volume.
- 5. (Previously Presented) The device as claimed in claim 4, wherein the second regulating device includes a calibrated rupture disk.
- 6. (Previously Presented) The device as claimed in claim 5, wherein the first sub-volume of the first volume, in which the pyrotechnic charge is placed, is delimited in part by the walls of a cartridge inserted in the body of the device.
- 7. (Previously Presented) The device as claimed in claim 6, wherein the pyrotechnic charge is placed in the cartridge between the calibrated rupture disk and a detonator able to initiate the pyrotechnic charge.
- 8. (Previously Presented) The device as claimed in claim 7, wherein the cartridge has the shape of an L-shaped duct in which the pyrotechnic charge is placed, the duct being blocked off at one of its ends by the detonator and at its other end by the calibrator rupture disk.
- 9. (Previously Presented) The device as claimed in claim 2, wherein the membrane deploys into the reservoir of active principle.
- 10. (Previously Presented) The device as claimed in claim 9, wherein the passage is offset from a longitudinal central axis of the combustion chamber and is formed in such a way as to be as far as possible away from the membrane.
  - 11. (New) The device as claimed in claim 1, wherein the membrane includes a

flange extending radially outward at the open end, the closed end being positioned, before the operation of the device, above the flange.